Definitions That You Might Need and Might Not Remember

A *graph* is a collection of vertices (that look like dots) and edges (that look like curves), where each edge joins two vertices. (Note that the word *vertex* is singular; its plural is *vertices*.)

Two vertices that are joined by an edge are called *adjacent*. Two edges that meet at a vertex are called *incident*.

A *subgraph* is a graph that is contained within another graph.

In a *connected* graph, there is a way to get from any vertex to any other vertex without leaving the graph.

A *cycle* is a sequence that alternates between vertices and edges, and whose only repetition is the first/last vertex.

A *tree* is a graph that is connected and has no cycles. A *forest* is a bunch of trees.

An *algorithm* is a finite list of unambiguous instructions. Basically an algorithm tells you how to accomplish some task.

A *spanning tree* is a tree that contains all the vertices of a given graph. Basically, it is the largest tree contained in a graph.

Weights are labels on the edges and/or vertices of a graph that often denote costs or distances or energies.

The *total weight* of a spanning tree is the sum of the weights on its edges.

A *minimum-weight* spanning tree is one that has the lowest possible total weight.